

M E M O R A N D U M

TO: Arne Franzen, City of Somerville
Brad Rawson, City of Somerville

FROM: George D. Naslas, PG, LSP, Weston & Sampson

DATE: March 20, 2018

SUBJECT: Conway Park Analytical Results

Introduction

Weston & Sampson completed the Supplemental Subsurface Investigation at Conway Park located on Somerville Avenue in Somerville, Massachusetts. The goal of the investigation was to further evaluate environmental conditions following an initial detection of metals and other contaminants during a Preliminary Environmental Investigation conducted in October 2017. The previous findings were documented in our Environmental Letter Report dated December 21, 2017 and discussed with the City at a meeting on January 10th, 2018. Although the initial investigation was limited, there was no evidence at that time that an Imminent Hazard (IH) existed, as defined under the Massachusetts Contingency Plan (MCP); 310 CMR 40.0000.

The initial investigation detected concentrations of selected metals, primarily lead, polychlorinated biphenyls (PCBs), and selected polycyclic aromatic hydrocarbons (PAHs) at concentrations that exceeded their respective Reportable Concentrations defined in the MCP. the 120-day notification deadline requires that a Release Notification Form (RNF) be submitted to MassDEP on or before **April 12, 2018** (based on the December report date). The Supplemental Subsurface Investigation was designed to further evaluate soil and groundwater at the Site (in both the playground area and the ballfield area).

Supplemental Subsurface Investigation results

Weston & Sampson advanced 14 borings and sampled shallow (0-3 feet) and selected deeper intervals for lead analysis. We also analyzed samples from eight of the borings for PCBs, and a larger suite of analyses from the two new borings in the playground area. Weston & Sampson also installed 4 groundwater monitoring wells in each corner of the park; we have not yet received the groundwater data.

Lead was detected in all 28 samples ranging from 0.25 mg/kg to 960 mg/kg. Seven of the samples exceeded the MCP Method 1 standard of 200 mg/kg with 14 of the samples below that standard. To evaluate the risk from lead we recommend a Method 3 Risk Characterization to evaluate site-specific risk.

PCBs were detected in seven of the eight locations sampled. One boring did not detect PCBs in either sample, three of the other samples were also below detection limits. Four samples were below the applicable Method 1 standard of 1 mg/kg, six of the samples ranged from 2.7-8.3 mg/kg and one sample from a 3-6 foot interval, detected PCBs at a concentration of 5,900 mg/kg.

Massachusetts Contingency Plan (MCP)

There are several regulatory issues surrounding the PCB detections in soil. Under the MCP, elevated concentrations of PCBs in shallow, accessible soil needs to be evaluated for an Imminent Hazard (IH), specifically,

from the 0-1 foot interval.

Currently, the field is fenced and locked and not considered accessible. The playground is accessible, although to date, the one sample analyzed for PCBs was below the regulatory standard. **We recommend an IH evaluation at selected locations to evaluate the 0-1-foot layer and in the interim we recommend restricting access to both the playground and the field.** If an Imminent Hazard is found to exist, MassDEP must be notified within 2 hours of the City obtaining knowledge of the condition. Therefore, by restricting access, an IH condition would not exist and the City's obligation to notify MassDEP by April 12, 2018 remains unchanged.

Toxic Substance Control Act (TSCA)

PCBs are also regulated under TSCA through EPA Region 1. Under TSCA, the City is required to notify the EPA PCB Coordinator for Region 1, Ms. Kim Tisa, of the PCB concentrations at the Site, and the planned repose actions going forward. Future remediation and use must be approved by Ms. Tisa. Assessment and redevelopment under TSCA can be handled under any one of three scenarios:

1. Self-Implementing Cleanup
 - a. Ties cleanup levels to end-use and occupancy rates
 - b. Can be very restrictive for large sites
 - c. Requires a very intensive and costly characterization effort
2. Performance-Based Cleanup
 - a. Soil must be remediated to PCB concentrations below 1 mg/kg
 - b. Far too restrictive and unfeasible for a large site with widespread PCB impacts
3. Risk-Based Cleanup
 - a. Remediation levels are based on a site-specific plan approved by PCB Regional Coordinator
 - b. Flexibility for large sites with widespread PCB impacts
 - c. Requires EPA review

Based on the concentrations of PCBs detected to date, the size of the Site, and desired end use, Weston & Sampson recommends pursuing a Risk-Based Cleanup under TSCA. To do this we will need to obtain approval for a characterization program and risk-based closure approach. We anticipate site closure through a combination of hot spot removal and risk assessment. We also assume that closure will be supported by covering the site with a marker barrier and cover system, which could be the new field.

At the City's request, Weston & Sampson will provide a proposal to perform the IH evaluation in the playground and ballfield areas, design and implement a TSCA Risk-Based Cleanup Plan, and initiate contact with Ms. Kim Tisa. We will also evaluate the historical information in more detail to try to understand the dates of placement of the fill. We assume that the fill originated either from the Bleachery operations or Bay State Smelting, both of which abutted the site.

Recommendation Summary

- Restrict Access to Field and Playground Area
- Conduct IH Assessment to evaluate top 1-foot and evaluate if the playground area can be re-opened
- Review Site history
- Develop a public communication strategy. At this time there is no regulatory requirement to post or notify abutters, however the City may choose to notify stakeholders or EPA may suggest public notification.
- Provide information to Kim Tisa and ideally meet with her, to discuss approach to assessment and remediation / site closure under TSCA
- Conduct assessment to support site closure approach
- Develop a plan for EPA to approve risk-based approach – this will tie to the field redevelopment design
- Ongoing MCP response actions are also required